TIMBO Bander Reference Guide

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Chapter 1. Introduction to TIMBO

Welcome

TIMBO is the latest in a long series of programs aimed at helping bird banders to manage the data for a large number of banded birds. TIMBO, an acronym for The Information Manager for Banding Operations, was created at the Bird Banding Laboratory (BBL) at the U. S. Geological Survey Patuxent Wildlife Research Center.

Features of TIMBO

The principal use of TIMBO is to store data obtained during banding operations and facilitate the transfer of banding data to the BBL. TIMBO has the ability to enter and edit data associated with bands obtained from the BBL as well as data for recaptured birds banded with bands not currently maintained by TIMBO. To transfer banding data to the BBL, TIMBO includes the ability to email the banding data directly, provided that the computer running TIMBO is connected to the Internet.

Other major features of TIMBO are itemized below:

- Data entry and editing can be performed via either a spreadsheet-like matrix or table interface or via a record-by-record form-based interface. The user can switch back and forth between the two interfaces just by clicking a button.

- Ability to enter data in an extensive list of fields, including the traditional fields (Species, Age, Sex, Banding Date, Banding Location, Bander ID, etc.) and a wide variety of other fields (how aged/sexed, extensive measurements, auxiliary markings, tests performed, molt/parasites observed, etc.) A complete list of fields in the banding record can be found in Appendix B, TIMBO Banding Record Fields.

- Pervasive error avoidance, error checking and feedback. Most of the fields in TIMBO have an auto-complete which checks against a list of predefined values. Where appropriate, you can also add your own values to these lists. Range checking, cross field validation, and location-based checking are included.

- Extensive export capabilities. All of the data contained in TIMBO, including all of the lookup tables, can be exported to a variety of other formats, including Excel, tab-delimited text, comma-delimited text, DBF, HTML, and XML.

- Banding location coordinates may be entered more precisely, including degrees, minutes, and seconds, and country, state/province, and county names.

- Data submission to the Bird Banding Lab can be done via an email link built into the program. The data submission can contain both new bandings and modifications made to banding records previously submitted.

Using TIMBO

The basic guiding principle in TIMBO is simple. We have tried to make the process of maintaining a series of banding records as simple as possible. The road forward is meant to be easy.

1. Install the program. First install the program onto your computer. You can just double click the installer program that you received and follow the instructions contained in the installer. More detailed instructions on the installation process can be found in Chapter 2, Installing TIMBO.

2. Run the program. On the PC, select the program from the Start menu, in the program group named TIMBO. On the Mac, select the program from the Applications folder. You may want to drag the icon to your dock so it is available there. On the opening screen, follow the steps labelled 1, 2, 3. Step 1 will take you to a screen where you can enter information about your permit and banders, the locations you are banding at, and some other preferences on how you want to use the program. To get back to the opening screen, click the word TIMBO at the top of the screen. Step 2 will allow you to check in the bands you received from the Bird Banding Lab. Click TIMBO to get back to the opening screen. Step 3 is for entering your banding information. You can switch back and forth between Table and Details data entry modes by clicking either Table or Details. More details on the Settings part of the program may be found in Chapter 3, TIMBO Settings. Details on accessing and updating the Banding Inventory maintained by TIMBO, including how to add bands into the Inventory, may be found in Chapter 4, Band Inventory. Likewise, Chapter 5, Banding with TIMBO, contains more information on the details of using TIMBO to store the data associated with banding operations.

3. Submit your data to the Bird Banding Lab by clicking on the Submit Data button on the Bands screen. A file will be created of any bands you have added or modified since the last time you submitted data to the Lab and an email with the file contained as an attachment will automatically be generated and will appear in your computer's email program. More details on the data submission process is available in Chapter 6, Data Submission.

4. Reports are available from the Bands and Recaptures screens. Select the report you want from the drop-down menu and click the Show/Print Report button. Reports can be sent directly to the printer and saved in either Excel or PDF format. See Chapter 7, Reports, for more details.

5. TIMBO contains a variety of other features. More information on the reference tables contained in TIMBO can be found in Chapter 8, Reference Tables. Methods for importing data into TIMBO and exporting data from TIMBO, see Chapter 9, Importing and Exporting.

Chapter 2. Installing TIMBO

The TIMBO software needs to be installed onto your computer for it to work. This chapter provides additional instruction on doing the installation.

System Requirements

TIMBO has advanced features which require a computer equipped with either Windows or Macintosh operating system.

Windows

- Operating System: Windows NT, Windows 2000, Windows XP. (Microsoft recently dropped support for earlier operating systems up to and including Windows 98.)

- Memory: Minimum 256MB RAM.

- Disk Space: Minimum 20MB free.

Macintosh

- Operating System: Macintosh OS X 10.2.x, 10.3.x, 10.4.x

- Memory: Minimum 256MB RAM.

- Disk Space: Minimum 20MB free.

Obtaining the Software

The first step in getting TIMBO installed on your machine is obtaining the software. You may have already received the software on CD ROM from the Bird Banding Lab. If so, insert the CD ROM into your CD ROM drive and follow the installation instructions contained on the CD ROM.

If you did not receive the software on CD ROM, you may download it from the Bird Banding Lab website, http://www.pwrc.usgs.gov/bbl/resources/timbo/timbo.htm. Download the version appropriate for the operating system you are using.

Installation

TIMBO comes with an installer program which will guide you through the installation of the program onto your computer.

Installing on Windows

If you need administrative access to install programs on your computer, you should request that the installation be performed by your system administrator.

Double-click the installer to begin the process. The installer will ask where you want to install the program. The default is inside the Program Files folder on your computer. You can install the program somewhere else if you have limited space on your default hard drive. Click Next to go to the next screen.

The installer will put the program into a folder available under your Start menu. The default name for this folder is TIMBO. You can give it a different name here. Click Next to go to the next screen.

You can have the installer create icons on the Desktop or in the Quick Launch bar at the bottom of the screen so you can get to the program without having to go back to the Start menu. If you want these icons, check the appropriate boxes. Then click Next to go to the next screen.

The program will show you a summary of the installation to make sure you want to proceed. Click the Install button to continue with the installation.

The installer will extract all of the files and store them on your computer. Finally, you will see a screen indicating the installation was successful and asking you if you want to run TIMBO. Click Finish to launch the program.

Installing on Macintosh OS X

You may need to know the name and password of a user that has administrative privileges on your computer. If this is your own machine, it is just your regular login name and password. If you don't know the name and password of a user with administrative privileges on your computer, you should request that the installation be performed by your system administrator. Alternatively, you can avoid this requirement by installing the software in a location other than the Applications folder.

Double-click the installer to begin the process. The installer will bring up a welcome screen. Click Continue to go to the next screen.

The installer will ask you to select the destination volume where TIMBO will be installed. Typically you will only have one hard disk and it will have a green arrow on it, indicating this is the selected drive. If you have more than one drive and you want to store the software on one of the other drives, click on the drive and the green arrow will move to this selected drive. Click Continue to go to the next screen.

If this is the first time you installed TIMBO on this computer, just click Install to continue to the next screen. If you have previously installed TIMBO on this computer, the installer will ask if you want to update the software. Click Update to go to the next screen.

Next the installer will ask where you want to install the program. By default, the program installs the software into a folder called TIMBO in your Applications folder. You can install the program somewhere else if you have limited space on your main drive.

The installer installs the software and you will see a screen indicating the installation was successful. Click the Close button to exit the installer.

Running TIMBO

Once you have successfully installed TIMBO onto your computer you can run the software by a variety of methods. In Windows, select the program from the TIMBO group in your Start menu, double-click the icon for TIMBO on your desktop (if you requested one during installation) or single-click the small bird icon in your Quick Launch bar (if you requested one during installation.) In Mac, open up the Applications folder, find and open the TIMBO folder, and drag the icon for TIMBO down to your dock. Then it will always be available for easy execution with a single click of the mouse.

When you first launch TIMBO, you will see the TIMBO opening screen, and a small dialog box will appear asking if you want to make a backup of your current TIMBO data file. It is a good idea to make a backup whenever you are going to be making changes to the file, in case you need to return to an earlier version of the database.

After you have dispatched the Backup dialog box, you wil be presented with an opening screen showing three ways of entering the program on the left and a summary of the banding data contained in the TIMBO data files on the right. The three ways of entering the program are presented as a numbered list:

1. Edit Settings. Click here to go directly to the Settings screen. If this is the first time you are using the TIMBO program, you probably want to go here first to set your basic settings for using the program. Refer to Chapter 3, TIMBO Settings for more details on the settings you can make to tailor your experience with TIMBO.

2. Add/Edit/View Band Inventory. Click here to go directly to the Band Inventory screen. If you just received some new bands from the BBL, you probably want to go here to add the bands to your inventory via the Check-in Bands process. Chapter 4, Band Inventory has a description of the use of the inventory and how to add bands into your inventory.

3. Add/Edit/View Bands. Click here to go directly to the Bands screen. If you just returned from a banding session, you probably want to go here to input the data you collected in the field into TIMBO. Refer to Chapter 5, Banding with TIMBO for more information about entering banding information into the program. Appendix A, Tips and Shortcuts contains useful keyboard shortcuts which will make the task of entering your banding data even faster.

Chapter 3. TIMBO Settings

You can navigate to the Settings section of TIMBO in one of two ways: Click on the button labelled 1 on the opening screen, or click the Settings mode key at the top of any of the other screens.

Once you are inside the Settings section, you will see five tabs: Bander Info, Data Entry, Band Edits, Locations, and Wing & Weight. Clicking on each of these tabs will bring up a page of fields to be filled in.

The most important pages are Bander Info, which allows you to enter information about the master bander and the sub-banders, and Locations, which allows you to enter information about the locations you are banding in.

To leave the Settings section, click on one of the other Section buttons near the top of the screen. If you allow your mouse to pause over each of these buttons you will see the purpose of each section. You can also click on the name of the program at the top of the screen to return to the opening screen, kind of like the home page in a web site.

Bander Info

Click the Bander Info tab to bring up the page where information about the banders can be stored. First, put in the name of the Master Bander and the Permit Number which was assigned by the Bird Banding Lab in the fields provided. Next, put the name of the Master Bander along with initials or another unique identifier in the first line of the table which appears below these fields by clicking on the Add button to the right of the table and entering the values in the appropriate columns. Only the initials (or other unique identifier) and name are required. You may put in a sub-bander id (but leave this field blank for the master bander) and contact information for the sub-banders. None of the information in this table is transmitted to the Bird Banding Lab. It is for your use in maintaining information about the banders.

Data Entry

Clicking on the Data Entry tab will bring up a page with information about coding formats, language, and measuring units used by the program. If you pause the mouse over each field a pop up window will appear giving more details on what goes in that field.

The first thing you probably want to change here is the coding format for entering Species, Bird Age, and Bird Sex codes. We have found that some banders prefer the numeric codes and others prefer the alphabetic codes. Once you pick which format you prefer, the program will rebuild the lookup tables to correspond to the selection you have chosen.

Band Edits

Clicking on the Band Edits tab will bring up a page with a few settings controlling the way edits are performed on the banding and recapture data.

Locations

An important characteristic of the banding and recapture data submitted to the Bird Banding Lab is the quality of the location data attached to the record. In the past, due to restrictive computer memory and digital storage, the Lab stored locations only to the nearest 10 minute block in both latitude and longitude. Because of advances in computer hardware technologies, the accuracy of banding locations can

be significantly enhanced. In TIMBO, we have taken the opportunity to permit the storage and transmission of banding locations to the nearest second.

All of the banding locations are stored in a table which can be easily accessed at any time by clicking on the Locations tab within the Settings function.

The table has places for a short identifier for each location (which must be unique), a description, and places to put in the latitude and longitude coordinates in degrees, minutes, seconds, and hemisphere. Country, State, and County are entered in the appropriate fields. State and County are placeholder names for the 1st and 2nd administrative divisions of the country. The last 2 columns, Is Valid and Bands Count, are used by the system to provide feedback on the locations in the table. Is Valid will have the value Yes if the coordinates provided match the bounding box outline for the Country, State, and County provided. Bands Count shows how many bands have been banded at a particular location.

Five buttons are placed to the right of the table to facilitate maintaining the locations table: Add, Delete, Print, Export, and Import.

Add   To add a new location into the locations table, click the Add button. The cursor will automatically be placed into the first column of the new entry.

Delete   If a location has been entered in error or is not being used it can be deleted. First click anywhere on the row containing the location to be deleted and then click the Delete button. The system checks to make sure that there are no bands which have been banded at that location in the database. If there are none, the location will be deleted.

Print   Use the convenient Print button to print out the locations.

Export   If you are interested in using the location information in another program you can use the Export button. The exported locations can be put into a file in a variety of formats. See Chapter 9, Importing and Exporting for more details on the formats provided.

Import   TIMBO supports importing locations from Band Manager. See Chapter 9, Importing and Exporting for detailed instructions on the use of this feature.

Wing & Weight

Clicking on the Wing & Weight tab brings up a table showing minimum and maximum wing chord and bird weight by sex for each species. This table is used to validate the wing chord and weight information collected via the optional wing and weight edits. (See the section on Band Edits, above.) The values in the table are incomplete but we have provided the capability of editing these values. Use the Find feature to find one or more species of interest by typing in a name, AOU Code, or numeric Species Code and clicking the Find button. You can just type a partial value and the entries that match will be returned. Click the Show All button to see all of the species. Finally, you can click the Export button to export the wing and weight values. See Chapter 9, Importing and Exporting for detailed instructions on the use of this feature and the file formats supported.

Other Settings

There is one additional setting you can make to turn on or off the automatic spell checker in TIMBO. Find this option by selecting File Options from the File menu. The spell checker is most useful in finding spelling errors in remarks fields, which will show up with a special colored underline familiar to users of Microsoft Word. For this application, though, many users will find the spelling checker unnecessary and intrusive.

Chapter 4. Band Inventory

The Band Inventory in TIMBO contains information about the collections of bands you have received from the Bird Banding Lab. These bands are issued as a string of bands having contiguous numbers spanning a range. This string of bands is commonly referred to as a band span.

You can navigate to the Band Inventory section of TIMBO in one of two ways: Click on the button labelled 2 on the opening screen, or click the Inventory mode key at the top of any of the other screens.

The primary function of the Band Inventory screen is to allow you to add bands to your inventory and edit the information about the band spans in your inventory. On the rare occasion that a span needs to be removed from the inventory, there is a facility provided for removing the span (and its associated banding records) from the active inventory. There is also an option for importing band spans into TIMBO. For more details on importing, see Chapter 9, Importing and Exporting.

To add band spans to your inventory, click on the Check-in Bands function in the functions bar above the table. This will bring up a new window with fields for entering the band number prefix, the starting and ending numbers of the sufix, the band size and type, the date you received the bands from the Lab, and a place for remarks. Enter the prefix and the two suffix values carefully. You will not be able to make changes to these fields later without deleting the span. The other fields can be modified later, if necessary. Finally, click the Check-in Bands button at the bottom of the window to initiate the check-in process. TIMBO will create a banding record for each of the bands within the span and automatically link them to the band span.

To leave the Band Inventory section, click on one of the other Section buttons near the top of the screen. If you allow your mouse to pause over each of these buttons you will see the purpose of each section. You can also click on the name of the program at the top of the screen to return to the opening screen, kind of like the home page in a web site. Typically, after entering spans into the band inventory you are ready to enter banding information. If so, just click the Bands section button near the top of the screen to go to the screen with the bands.

Chapter 5. Banding with TIMBO

Clicking on Step 3 from the opening screen or clicking on the Bands section button from one of the other screens will bring up the banding screen. This is actually a pair of screens showing two views of the same information. The table view shows a matrix or table of the information in the banding records. You can use this view to see a large amount of information at a glance and rapidly enter a large amount of data. The details view allows you to see the details of a particular banding record all at once, without having to scroll horizontally. This view can be easily navigated by using the light gray navigation panel which appears to the left of the screen. Using this panel you can flip forwards and backwards through the banding records or jump directly to a particular banding record.

Banding Table Mode

The table mode presents the banding data in much the same way as it would appear in a spreadsheet. Like a spreadsheet you can rapidly enter information and use other keyboard commands to skip to the next and previous fields horizontally and vertically, duplicate information in successive records, jump to the first field in the table, etc.

Resizing and Repositioning Columns

TIMBO allows you to set the relative position size of each column. Once you set the sizes and positions, the columns will remain the way you set them through each successive use of the program, until you change them again. To set the size of a column, position the cursor between two columns. A double-headed arrow cursor will appear. Click and drag the cursor to the left to make the column smaller and right to make the column larger. To reposition a column, click and drag it to a new location to the right or left. A dark line will appear to show you the position you are dragging to as you drag the column to the left or right. When you get the column where you want it, let go of the mouse button. The column will move in place.

Sorting Columns

Most of the time when you are banding you will want to see the banding records sorted in band number order. For other uses, you can sort on any column by just clicking on the column header. Click once to sort in ascending order. Click again to sort in descending order. Click on another column to sort the records based on the value in that column.

Entering Banding Data in Table Mode

To enter banding data, click on one of the columns to start. You can see what is supposed to be entered into a particular column by pausing over each column. A small text box will appear with details on what is supposed to be entered into each field. You cannot enter anything into the band number field as that field is prepopulated from the check-in bands process. Pausing over the band number field will give you a summary of information about the band.

Many of the fields have a list of possible values associated with them. You can click the little triangle to bring up the list or just type in the value yourself. For coded fields, you may wish to refer to the associated reference table. You may do so at any time by clicking on the Reference section tab near the top of the screen. When you return to the Bands section, you will still be in the same place you were when you left the screen.

The Species, Age, and Sex fields can be coded using either alpha or numeric codes. Refer to the Data Entry section in Chapter 3, TIMBO Settings, for details on how to tell TIMBO which coding format you wish to use.

Many of the fields feature type-ahead completion. As you type, the program looks through the list of possible values and finds the first one that matches what you have typed so far, completing the value. If this is the value you want you can just tab to the next field. If this is not the value you want, continue typing until the value is matched.

The Tab key takes you to the next field. Shift-Tab takes you to the previous field.

Banding Details Mode

Other Features of the Banding Screen

The banding screen has several other important features. The most important is the ability to Submit Banding Data back to the BBL.

Other features facilitate data entry and editing such as the ability to filter the bands visible on the screen, propagate field values throughout a collection of bands, duplicate the contents of a banding record, and clear out (reset) a banding record. Also, see Appendix A, Tips and Shortcuts for additional enhancements to data entry and editing.

Filtering Banding Data

Fill-down Feature

Duplicating Banding Records

Clearing Banding Data

Submitting Banding Data

The facility to submit banding data back to the BBL is initiated by selecting the Submit Data function found on the Bands screen. Chapter 6, Data Submission, has detailed information about this capability.

Importing Banding Data

Banding data can be imported by selecting the Import -> Bands menu item from the File menu. See Chapter 9, Importing and Exporting, for more details on this capability.

Exporting Banding Data

If you want to export your banding data for use in another program you can use one of several methods for data export found on the banding screen:

• Export Bands. Extract the banding information and create an external file in a variety of formats. You can choose which fields you want to see and the order in which you want them to appear.

- Save as PDF. Saves a version of the banding record (or records) as it (they) appear on the screen as an Adobe Portable Document Format (PDF) file suitable for printing or emailing.

- Save as Excel. This is a shortcut to the Export Bands function which outputs directly to the Microsoft Excel worksheet format. You can choose which fields you want to see and the order in which you want them to appear.

See Chapter 9, Importing and Exporting, for more details on this capability.

Reports

The Banding screen also provides easy access to a variety of reports. Select the report you want to see from the drop-down list and click the Show/Print Report button. The report will be created in another window. You can flip through the pages by using the book icon in the left panel and then choose to send the output to the printer, save the results in Microsoft Excel format, or create an Adobe Portable Document Format (PDF) file. See Chapter 7, Reporting, for more details on the reports provided and detailed instructions for using the report facilities.

Chapter 6. Data Submission

In previous incarnations of the programs used to manage banding information, banding data was arranged to match a special paper coding form called a Banding Schedule. Typically banders would populate the paper Schedule, then input the data into the program and create a file version of the schedule which was then submitted to the Bird Banding Lab. Many banders found this confusing, as they were unsure whether they had to wait until the schedule was completely filled out before they could send the banding data to the Lab.

In TIMBO we decided to take a different approach. Whenever you have either new banding data or you have modified some existing banding records you can submit the data back to the Lab. Hopefully this will make submission of banding data to the Lab both less cumbersome and more timely.

The Data Submission Process

When you initiate the Data Submission process by clicking on the Submit Data function on the Banding screen the system automatically goes through the data looking for bands which have been used but not sent back to the Lab. These bands are added into the list for possible inclusion. The system also looks to see if the data for any bands has been modified since the last time that data was transmitted to the Lab. If so, these bands are also marked for inclusion in the data submission.

Next the data is checked for errors. If there are any errors, a message will appear informing you of the problems and directing you to the location of error messages which will help you to resolve the errors. You can bypass the errors and perform the data submission anyway by setting Bypass Errors to Yes on the Details page for each band with an error.

TIMBO prepares the file and automatically launches your system-wide email program to send the message containing the file directly back to the BBL.

The file containing the data submission is saved to your My Documents folder (Documents folder on the Mac) with the name TIMBO_Submission_PPPPP_YYYYMMDDHHMM.tab, where PPPPP is the permit number, YYYY is the current year, MM is the current month, DD is the current day of the month, HHMM is the time the file was created. So TIMBO_Submission_55555_200607241020.tab contains a data submission that was created July 24, 2006 at 10:20am by the bander with permit number 55555.

Chapter 7. Reports

Chapter 8. Reference Tables

TIMBO uses a variety of reference tables to facilitate data entry and aid in the error checking process. The reference tables are part of the data, rather than being part of the program code, making updates both possible and straightforward.

To see what is contained in any of the reference tables, click on the Reference tab at the top of the screen. Here is a list of the reference tables and their use.

Age	Bird age codes and meanings. Both alpha and numeric codes are given. Used in the drop-down lists for age data entry and error checking.
Sex	Bird sex codes and meanings. Both alpha and numeric codes are given. Used in the drop-down lists for sex data entry and error checking.
Size	List of band sizes. Refer to the Species tab to see which band sizes are allowable on which species of bird. Used in the drop-down list for band sizes.
Type	List of the types of bands which may be used. Used in the drop-down list for band types.
Species	Bird species AOU codes, numeric species ids, names, and allowable band sizes. Used in the drop-down list for species and for error checking. Because this list is lengthy, it includes a search facility.
Status	Combination of the band status and bird status. Lists status code, the short meaning, and a longer description. Because this list is lengthy, it includes a search facility
Present Condition	List of the codes and their meanings for the condition of the bird when it was released.
Disposition	List of banding record disposition codes and their meanings.
How Aged	List of how aged codes and their meanings.
How Sexed	List of the how sexed codes and their meanings.
Species-Age-Sex-Month	Months or fractions of months a particular species, age of bird, and sex of bird combination can be encountered.
Species-State-Month	Months or fractions of months a particular species may be encountered within a particular state or country.
Region	Region codes and their equivalent meanings for geographic regions. The region codes are being fazed out in favor of using the Federal Information Processing Standard (FIPS) codes for country, state/province/territory, and county/parish/district.

Chapter 9. Importing and Exporting

The ability to transfer data between TIMBO and other programs such as Excel and SAS is an import part of successfully integrating the product into your work processes. The current version of TIMBO has only limited import capabilities. These capabilities will be enhanced in a later version.

Importing from Band Manager

Currently TIMBO only supports importing from Band Manager. You can import four kinds of records from Band Manager: Band Inventory, Banding Locations, Banders, and Bands. The first step is to use the export facilities of Band Manager to export the data in each of these four areas. Export the files to a location on your disk you will be able to easily locate later, and be sure to give the files meaningful names so you know what each of the files contains.

Imports for all four kinds of records from Band Manager can be done by selecting the kind of records from the Import item located in the File menu. Additionally, locations can be added by clicking the Import button on the Locations tab of the Settings screen. Banders can also be added by clicking the Import button on the Bander Info tab of the Settings screen.

However you reach the import function, the process is the same: find the file containing the records you exported from Band Manager, verify the fields from the import file match the fields in the TIMBO record, and click the Import button. TIMBO will automatically verify the data from the import file and incorporate it into the TIMBO data file.

Exporting from TIMBO

TIMBO has several ways of exporting data. You can export data to Adobe Portable Document Format (PDF), Microsoft Excel Worksheet format, or a variety of other formats, including tab-delimited text, comma-delimited text, SYLK, DBF, HTML Table, and XML.

Exporting Band Inventory, Band, and Recapture Records

Exporting Reference Tables

Appendix A. Tips and Shortcuts

On the Bands and Recaptures screens (both Details and Table data entry modes) you can duplicate the contents of the current record into the next record by selecting Duplicate from the Records menu or using the keyboard shortcut (Windows: CTRL-d; Macintosh: CMD-d).

To duplicate (ditto) the contents of a field from the same field in the previous record, type Windows: CTRL-' (single quote mark); Macintosh: CMD-' (single quote mark). Add the shift key (Windows: SHIFT-CTRL-' (single quote mark); Macintosh: SHIFT-CMD-' (single quote mark)) to do the duplicate (ditto) and auto tab to the next field.

To enter today's date, type Windows: CTRL-(dash); Macintosh: CMD-(dash).

To enter the current time, type Windows: CTRL-(semicolon); Macintosh: CMD-(semicolon).

To go to the next record, type CTRL-(down arrow). To go to the previous record, type Windows: CTRL-(up arrow).

To go to the first field in the record, type Windows: CTRL-(left arrow); Macintosh: CMD-(left arrow).

Appendix B. TIMBO Band Record

Within TIMBO, the Band Record is the primary place where data is stored about a banding. Although many of the fields contain primary information about banding, some of the fields are used for error checking. In this Appendix, only the fields of general interest to banders will be described.

Age	User-visible age code in either alpha or numeric form, depending on the setting in the preference section.
Age Code	Numeric age code equivalent of the Age field.
AOU	Numeric species id based on the AOU numbering scheme.
Aux Marker Band Color	The code referencing the color of the auxiliary marker band.
Aux Marker Code	The alphanumeric string imprented on the band.
Aux Marker Code Color	The code referencing the color of the alphanumeric string imprinted on the band.
Aux Marker Combined	Combined auxiliary marker field.
Aux Marker Type	The type of auxiliary marker used on the bird.
Band Number	Calculated version of the band number containing the prefix, a dash, and the suffix.
Band Size	Coded size of the band.
Bander ID	Identifier for the bander who handled this bird. If this was an official sub-bander, this should be the sub-bander ID.
Banding Date	Date the bird was banded.
Bill Height	Height of the bill.
Bill Length	Length of the bill.
Bill Width	Width of the bill.
Bird Status	The 3-digit code indicating the status of the bird after the banding operation was completed.
Bird Weight	The weight of the bird at the time it was captured.
Body Molt	Whether or not body molt was observed.
Brood Patch	Presence and size of the brood patch using the scale 0-4.
Capture Time	Time of day the bird was captured.
Colacal Protuberance	Presence and size of the colacal protuberance using a scale of 0-4.
Culmen Length	Length of the culmen.
Date Received	Date the band was received.

Disposition   Code indicating what happened to the band.

Extoparasites   Whether or not extoparasites were present on the bird.

Eye Color   Color of the eyes of the bird.

Fat Score   Amount of migratory fat found on the bird, using a scale of 1-6.

How Aged   Code indicating how the age of the bird was determined.

How Captured   Code indicating how the bird was captured.

How Sexed   Code indicating the method used to determine the sex of the bird.

Left Leg Color 1   Color of the 1st auxiliary marker on the left leg for non-coded markers.

Left Leg Color 2   Color of the 2nd auxiliary marker on the left leg for non-coded markers.

Left Leg Color 3   Color of the 3rd auxiliary marker on the left leg for non-coded markers.

Net Nest Cavity Designator   Label for Net Nest Cavity Number. Could be Net, Nest, Box, etc.

Net Nest Cavity Number   Specific location where bird was captured from.

Prefix   The 4-digit prefix of the band number. The value has leading zeros if necessary.

Present Condition   The condition of the bird.

Right Leg Color 1   Color of the 1st auxiliary marker on the right leg for non-coded markers.

Right Leg Color 2   Color of the 2nd auxiliary marker on the right leg for non-coded markers.

Right Leg Color 3   Color of the 3rd auxiliary marker on the right leg for non-coded markers.

Remarks   Free-form text for remarks relating to this bird. May indicate additional information about aux markers, methods used, etc. Only the first 80 characters of the remarks are included in the data submission.

Replaced Band Number   If the band is a replacement band or an additional band put on a bird, this field contains the band number of the original band.

Reward Band Number   5- or 6-digit reward band number.

Scribe   Initials or reference to the person writing down information at the banding site.

Sex   The sex of the bird in coded form. Can be either alpha or numeric code, depending on what the user requested in preferences.

Sex Code   Numeric version of the sex of the bird.

Skull	Degree of skull pneumatization, using a scale of 1-6.
Species	The 4-letter or 4-digit code representing the species of the bird in either alpha or numeric format, depending on the preference set by the user.
Species Name	The name of the species of the bird.
Suffix	The 5-digit suffix of the band number. This number has leading zeros, if necessary. The 5 digits of the band number stored here are actually the last 5 digits of what is really a 6-digit suffix.
Tail Length	Length of the tail of the bird.
Tarsus Length	Length of the tarsus of the bird.
Tests Performed	The tests which were performed on the bird.
Weight Time	The time of day the bird was weighted.
Wing Chord	The length of the wing chord of the bird.